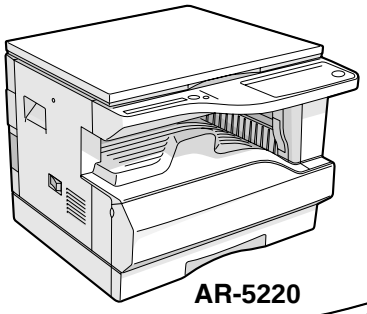
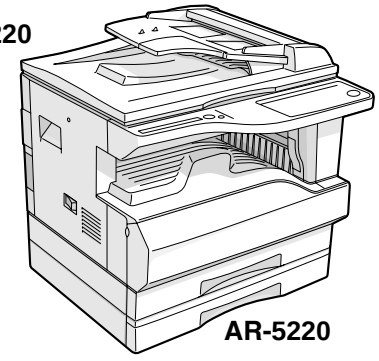
SHARP SERVICE MANUAL

CODE : 00ZARM205/A1E



AR-5220



AR-5220

(With SPF and ARD24 installed)

DIGITAL COPIER

MODEL AR-5220

CONTENTS

[1] GENERAL . . . . . 1 - 1
[2] SPECIFICATIONS . . . . . 2 - 1
[3] CONSUMABLE PARTS . . . . . 3 - 1
[4] EXTERNAL VIEWS AND INTERNAL STRUCTURES . . . . . 4 - 1
[5] UNPACKING AND INSTALLATION . . . . . 5 - 1

Parts marked with "⚠" are important for maintaining the safety of the set.
Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

CAUTION

This product is a class 1 laser product that complies with 21CFR 1040.10 and 1040.11 of the CDRH standard and IEC825. This means that this machine does not produce hazardous laser radiation. The use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
This laser radiation is not a danger to the skin, but when an exact focusing of the laser beam is achieved on the eye's retina, there is the danger of spot damage to the retina.
The following cautions must be observed to avoid exposure of the laser beam to your eyes at the time of servicing.

1) When a problem in the laser optical unit has occurred, the whole optical unit must be exchanged as a unit, not as individual parts.
2) Do not look into the machine with the main switch turned on after removing the developer unit, toner cartridge, and drum cartridge.
3) Do not look into the laser beam exposure slit of the laser optical unit with the connector connected when removing and installing the optical system.
4) The middle frame contains the safety interlock switch.
   Do not defeat the safety interlock by inserting wedges or other items into the switch slot.

Warning!
This product is a class A product.
If it is operated in households, offices or similar surroundings, it can produce radio interferences at other appliances, so that the user has to take adequate countermeasures.

CLASS 1 LASER PRODUCT

LASER KLASSE 1

LUOKAN 1 LASERLAITE

KLASS 1 LASERAPPARAT

VAROITUS!
LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VARNING
OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING, SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

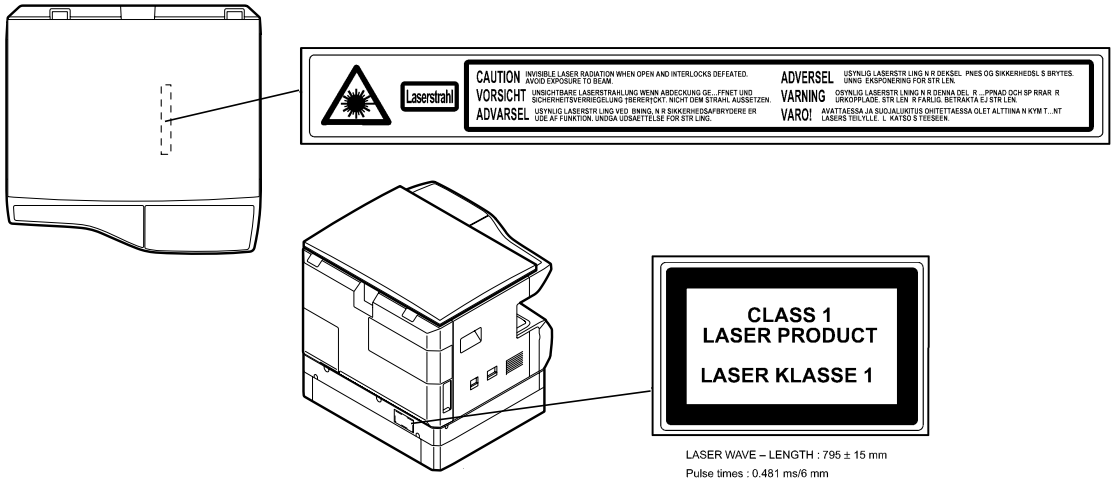
CAUTION
INVISIBLE LASER RADIATION,
WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.

VORSICHT
UNSICHTBARE LASERSTRAHLUNG,
WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.

VARO !
AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE ÄLÄ KATSO SÄTEESEEN.

ADVARSEL
USYNLIG LASERSTRÅLNING VED ÅBNING, NÅR SIKKERHEDSBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLNING.

VARNING !
OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN. – STRÅLEN ÄR FARLIG.



Disconnect the AC cord before servicing the unit.

LASER WAVE – LENGTH : 795 ± 15 mm
Pulse times : 0.481 ms/6 mm
Out put power : 5 mW

CONTENTS

[1] GENERAL

1. Note for servicing 1-1

[2] SPECIFICATIONS

1. Copy mode 2-1

[3] CONSUMABLE PARTS

1. Supply system table 3-1
2. Environmental conditions 3-2
3. Production number identification 3-2

[4] EXTERNAL VIEWS AND INTERNAL STRUCTURES

1. Appearance 4-1
2. Internal 4-1
3. Operation Section 4-2
4. Motor, solenoid, clutch 4-3
5. Sensor, switch 4-4
6. PWB unit 4-5
7. Cross sectional view 4-6

[5] UNPACKING AND INSTALLATION

1. Installing conditions 5-1
2. Removal of protective material and fixing screw 5-1
3. Installing procedure 5-1
4. Removal and storage of fixing screw 5-2
5. Changing the copy paper size in the tray 5-3

[1] GENERAL

1. Note for servicing

Pictogram

The label (⚠ ♨) in the fusing area of the machine indicates the following:

⚠ : Caution, risk of danger

♨ : Caution, hot surface

A. Warning for servicing

•The fusing area is hot. Exercise care in this area when removing misfed paper.

•Do not look directly at the light source. Doing so may damage your eyes.

B. Cautions for servicing

•Do not switch the machine rapidly on and off. After turning the machine off, wait 10 to 15 seconds before turning it back on.

•Machine power must be turned off before installing any supplies.

•Place the machine on a firm, level surface.

•Do not install the machine in a humid or dusty location.

•When the machine is not used for a long time, for example, during prolonged holidays, turn the power switch off and remove the power cord from the outlet.

•When moving the machine, be sure to turn the power switch off and remove the power cord from the outlet.

•Do not cover the machine with a dust cover, cloth or plastic film while the power is on. Doing so may prevent heat dissipation, damaging the machine.

•Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser radiation exposure.

•The socket-outlet shall be installed near the machine and shall be easily accessible.

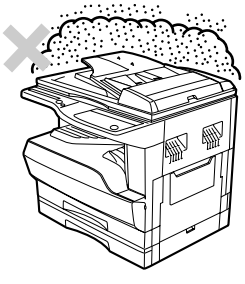
C. Note for installation place

Improper installation may damage the machine. Please note the following during initial installation and whenever the machine is moved.

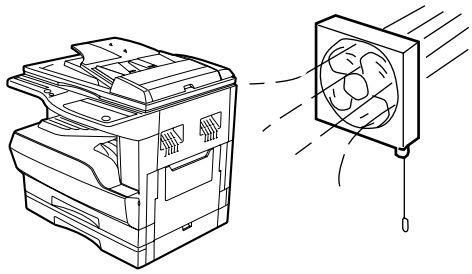
Caution : If the machine is moved from a cool place to a warm place, condensation may form inside the machine. Operation in this condition will cause poor copy quality and malfunctions. Leave the machine at room temperature for at least 2 hours before use.

Do not install your machine in areas that are:

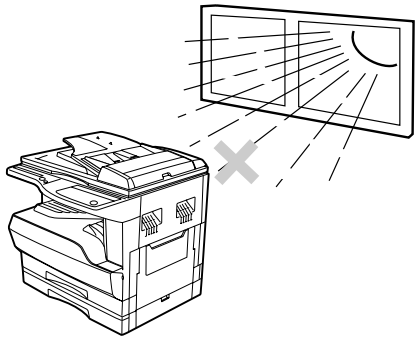
•damp, humid, or very dusty



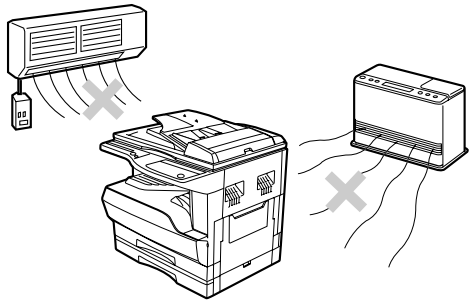
•poorly ventilated



•exposed to direct sunlight



•subject to extreme temperature or humidity changes, e.g., near an air conditioner or heater.

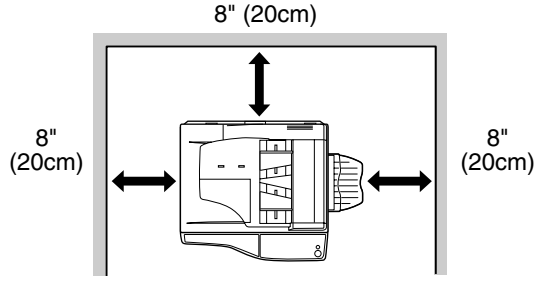


The machine should be installed near an accessible power outlet for easy connection and disconnection.

Be sure to connect the power cord only to a power outlet that meets the specified voltage and current requirements. Also make certain the outlet is properly grounded.

Note : Connect the machine to a power outlet which is not used for other electric appliances. If a lighting fixture is connected to the same outlet, the light may flicker.

Be sure to allow the required space around the machine for servicing and proper ventilation.



[2] SPECIFICATIONS

1. Copy mode

A. Type

Type	Desk-top
Paper exit	Wing less

B. Machine composition

AR-5220	20-CPM multi function model
AR-M205	20-CPM multi function model

(1) Option

Machine	Model	
250 sheets paper feed unit	AR-D24	
250 sheets x 2 paper feed unit	AR-D25	
SPF	AR-SP6	
RSPF	AR-RP6	AR-M205 only
Original cover	AR-VR5	
Dual function board	AR-EB7	
Network expansion kit	AR-NB2	Available from October
PS3 expansion kit	AR-PK1/N	option for AR-NB2
256MB optional memory	AR-SM5	

C. Copy speed

(1) Scan One Print many

AR-M205 / AR-5220	Available

Condition: Copy speed in the normal copy from all the paper feed ports including the manual paper feed port.

(2) Continuous copy speed (Sheets/min)

a. AR-M160

Paper size		Normal	Enlargement (200%)	Reduction (50%)
AB system	A3	9	9	9
	B4	10	10	10
	A4	16	16	16
	A4R	12	12	12
	B5	16	16	16
	B5R	14	14	14
Inch system	11" X 17"	9	9	9
	8.5" X 14"	10	10	10
	8.5" X 13"	11	11	11
	8.5" X 11"	16	16	16
	8.5" X 11"R	12	12	12
	8.5" X 5.5"	16	16	16

b. AR-M205 / AR-5220

Paper size		Normal	Enlargement (200%)	Reduction (50%)
AB system	A3	11	11	11
	B4	12	12	12
	A4	20	20	20
	A4R	14	14	14
	B5	20	20	20
	B5R	16	16	16
Inch system	11" X 17"	10	10	10
	8.5" X 14"	12	12	12
	8.5" X 13"	12	12	12
	8.5" X 11"	20	20	20
	8.5" X 11"R	15	15	15
	8.5" X 5.5"	20	20	20

D. First copy time

(1) Basic speed

First copy time	7.2sec (A4, 8.5" X 11"/1st tray/with OC) (Polygon motor ready state)

E. Document

Max. document size	A3, 11" X 17"
Document reference position	Left side center
Detection (Platen)	None
Detection size	A3, B4, A4, A4R, B5, B5R, A5 11" X 17", 8.5" X 14", 8.5" X 13", 8.5" X 11", 8.5" X 11"R, 8.5" X 5.5" (8.5" X 13" is detected by key input.)

(1) SPF/R-SPF

Standard/Option	Option SPF: AR-SP6 (AR-5220 only) RSPF: AR-RP6 (AR-M205 only)
Document load capacity	40 sheets (Thickness 4mm or less)
Document size (Max. ~ Min.)	A3 ~ A5 11" x 17" ~ 8.5" x 5.5" (8.5" x 5.5", duplex is inhibited.)
Document replacement speed	AR-M205:20 sheets/min AR-5220:20 sheets/min (A4 , 8.5" x 11" normal copy)
Document set/Paper feed direction	Face up, Center reference, Paper feed from the top
Document weight	56 ~ 90g/m², 15 ~ 24 lbs
Document size detection	On the document feed tray
Document mixture	Copy mode: Not Available

F. Paper feed

Copy size (Max. ~ Min.)	A3 ~ A6 11" x 17" ~ 8.5" x 5.5"	
Paper feed system	1 cassette + Multi manual paper feed	
Paper feed capacity	AR-M205	250 x 2 (Paper feed tray) + 100 (Multi bypass feed tray)
	AR-5220	250 x 1 (Paper feed tray) + 100 (Multi bypass feed tray)
Remaining quantity detection	Cassette section	Only empty detection available
	Manual tray	Only empty detection available

(1) Paper feed section of the copier

Paper feed size	A3, B4, A4, A4R, B5, B5R, A5 11" x 17", 8.5" x 14", 8.5" x 13", 8.5" x 11", 8.5" x 11"R, 8.5" x 5.5" (For A5 and 8.5" x 5.5", only No. 1 tray available.)
Side front	Front
Paper feed capacity	250 sheets (56 ~ 90g/m² equivalent) (15 ~ 21 lbs.)
Detection	Paper empty detection available, size detection (by key input)
Weight	56 ~ 90g/m² (15 lbs. ~ 21 lbs.)
Special paper	Recycled paper

(2) Manual paper feed section

Paper feed size	A3 ~ A6, 11" x 17" ~ 8.5" x 5.5"
Paper feed capacity	100 sheets(56 ~ 80g/m²)
Detection	Size detection not available, paper empty detection available
Weight	56 ~ 200g/m² (15 ~ 34 lbs.)
Special paper	Recycled paper, OHP film, labels
Paper feed	Single except for recycled paper

(3) Option paper feed unit

	1-step paper feed unit	2-step paper feed unit
Model	AR-D24	AR-D25
Paper feed size	A3, B4, A4, A4R, B5, B5R 11" x 17", 8.5" x 14", 8.5" x 13", 8.5" x 11", 8.5" x 11"R	
Capacity (56 ~ 80gm²)	About 250 sheets x 1 step	About 250 sheets x 2 steps
Paper weight	56 ~ 90 g/m² (15 ~ 21 lbs.)	
Moisture preserving heater	None	
Paper empty detection	Available	
Paper size setting	User setting Paper size detection:None	
External dimensions (W x D x H)	590 x 471 x 88mm	590 x 471 x 173.5mm
Weight	About 4.7kg	About 10kg
Special paper	Recycled paper	
Power	Supplied from the machine	

G. Job speed

S-S (1st step)	100% (document replacement rate)

Condition:With SPF/RSPF A4/Letter Normal 1cassette

H. Multi copy

Max. number of multi copy	999 sheets

I. Warm-up time

Warm-up time	45 sec
Pre-heat	Available
Jam recovery	Within 45 sec

J. Copy magnification ratio

Fixed magnification ratio	AB system: 50, 70, 81, 86, 100, 115, 122, 141, 200%
	Inch system: 50, 64, 77, 95, 100, 121, 129, 141, 200%
Zooming	25 ~ 400% SPF/RSPF(50 ~ 200%)
Independent zooming(vertical)	Available (25 ~ 400%) SPF/RSPF(50 ~ 200%)
Independent zooming (horizontal)	Available (25 ~ 400%) SPF/RSPF(50 ~ 200%)

K. Print density

Density mode	Auto / Text / Photo
No. of manual adjustment	5 steps (Text / Photo)
Resolution	Writing: 600 x 600dpi Reading: 600 (main) x 600 (sub) (PHOTO mode) 600 (main) x 300 (sub) (AE mode)
Gradation	Reading: 256 gradations Writing: Binary
Toner save mode	Set by the user program

L. Void width

Void area	Lead edge 1 ~ 4mm, rear edge 4mm or less, both sides 4mm or less
Image loss	4mm or less

M. Auto duplex

Standard/ Option	Standard provision (AR-M205 only) (D → D / D → S enable only when RSPF is installed) Not available for AR-5220

N. Paper exit / finishing

Paper exit section capacity	Face down 250 sheets
Full detection	None
Finishing	Dual function board: Option (AR-EB7)
Electronic sort capacity	A4 (8.5" x 11") standard document 100 sheets
Offset function	Available (by the shifter)
Staple function	None

(1) Electronic sort board (Option)

Electronic sort	Sorting	100 sheets of A4 standard documents
	Grouping	100 sheets of A4 standard documents
Rotation copy	If there is paper of same size as the document, the image is rotated to copy even though the paper is set in the different direction from the document direction.	
2 in 1, 4 in 1	Copies of 2 pages or 4 pages are integrated into one surface. Divided by solid lines, (Selectable by the user program.)	
Edge erase	Images surrounding the document are erased when copying. (Adjustable in 5 ~ 20mm by the user program.)	
Center erase	The image at the center is erased when copying. (Adjustable in 5 ~ 20mm by the user program.)	
Margin shift	Binding margin is made at the left edge of the set documents. (Adjustable in 5 ~ 20mm by the user program.)	
Memory for electronic sort	16MB	
* Memory loading capacity	A4 standard 100 pages	
Memory expansion	DIMM memory slot x 1, max. 256MB x 1 slot + 16MB (Max. 272MB in total)	
USB2.0	Standard provision of E-sort	
SPLC (JBIG-GDI)	Supported when E-sort is installed.	
ROPM	Supported when E-sort is installed.	

O. Additional functions

APS	O	
AMS	O	
Auto tray switching	O	
Memory copy	O	
Rotation copy	△	
E-sort	O	Option
Rotation sort	X	
Independent zooming	O	
1 set 2 copy	O	Enlargement invalid/SPF invalid (Patent rotation)
Binding margin	△	Default AB series: 10mm (5, 10, 15, 20mm) Inch series: 1/2 inch (1/4, 1/2, 3/4, 1 inch)
Edge erase	△	Default AB series: 10mm (5, 10, 15, 20mm) Inch series: 1/2 inch (1/4, 1/2, 3/4, 1 inch)
Center erase	△	Default AB series: 10mm (5, 10, 15, 20mm) Inch series: 1/2 inch (1/4, 1/2, 3/4, 1 inch)
Black/white reverse	X	
2in1/4in1	△	
Sorter	O	Offset function (Shifter) provided
Preheating	O	The conditions are set by the user program.
Auto shut-off	O	The conditions are set by the user program.
User programming	O	
Total counter	O	Supports Total counter, Scan counter, and Copy counter.
Coin vendor support	O	(Supports I/F only.)
Auditor support	O	(Supports I/F only.)
Duplex	O	(Standard provision for the model of 20-sheet model only)
Toner save	O	(Set according to the destination)
Department management	O	(Copy: 20 Dept.)

O : Available △ :Installation of the option is required.
X : Not available

P. Other specifications

Photoconductor type	OPC (Organic Photo Conductor)
Photoconductor drum dia.	30mm
Copy lamp	Cold cathode fluorescent lamp (CCFL)
Developing system	Dry 2-component magnetic brush development
Charging system	Saw teeth charging
Transfer system	(+) DC corotron
Separation system	(-) DC corotron
Fusing system	Heat roller
Cleaning system	Contact blade

Q. Package form

Body	Body / Accessories

R. External view

External dimensions (W x D x H)	590 x 577 x 520 mm(AR-M205) 590 x 577 x 470 mm(AR-5220)
Occupying area (W x D)	590 x 531mm (When the manual tray is installed.)
Weight	About 31.3kg (AR-5220) About 35.1kg (AR-M205)

S. Power source

Voltage	AC120V, 220V, 230V, 240V ±15%
Frequency	50/60Hz common

T. Power consumption

Max. power consumption	1200W

* EnergyStar conformity

Average power consumption in operation	Less than 550W
Power consumption when standby	5W(Not include option)
Energy consumption efficiency	Less than 25W

U. Digital performance

Resolution	Reading	600 x 600dpi (PHOTO mode) 600 x 300dpi (AE mode)
	Writing	600 x 600dpi
Gradation	Reading	256 gradations
	Writing	Binary
Memory	Simplex:16MB Duplex:32MB	
Hard disk	None	

V. Printing function

Print speed	<Standard>12ppm (With the AR-EB7 installed) 20ppm (AR-5220) / 20ppm (AR-M205)
Data resolution	600dpi
Option memory	16MB (with the AR-EB7 installed) 256MB (AR-SM5) can be added to the AR-EB7.
Printer driver	Two drivers for the case when the AR-EB7 is installed and when it is not are automatically installed by plug & play. <Standard> SHARP GDI driver <with the AR-EB7 installed> SPLC driver

W. Scanner function

Type	Flat bed color scanner
Scan system	Document table/document feed unit
Light source	White CCFL
Resolution	Basic 600 x 1200dpi Set range: 50 ~ 9600dpi
Document	Sheet/Book
Effective scan range	OC/SPF: about 297(length) x 431(width) mm
Scan speed	OC/SPF: 2.88msec/line (Color)
Input data	1bit or 12bit
Output data	1bit or 8bit
Scan color	Black and white binaryGray scaleFull color
Protocol	TWAIN/WIA (XP only) / STI
Interface	USB1.1 USB2.0 (Option support: High-speed mode/Full speed mode (Switched by the user program.)) (Supported when E-sort is installed)
Scanner utility	Sharp Desk/Button Manager
Drop-out color	Provided
Scanner button	Provided (6)
Supported OS	Windows98/ME/2000/XP
Void area	Lead edge/rear edge (2.5mm) on the driver side Left/right: 3.0mm
WHQL support	Yes

3 CONSUMABLE PARTS

AR5220 SERIES SRU (LAG)

No.	ITEM	CONTENT	LIFE	MODEL	REMARKS
1	Toner Cartridege (Black) with IC	TONER X10	19K X 10	AR-016LT	Can be used for Zebra (AR-5015,AR5015N) Life: 6% coverage, LT, toner save
2	Toner kit	TONER X20 IC CHIP X20 Filling Hose X1 Toner Cap23 X20 Toner Cap27 X20	19K X 20	AR-016RT	Can be used for Zebra (AR-5015,AR5015N)
3	Developer	Developer X10	50K X10	AR-202LD	Can be used for Zebra (AR-5015,AR5015N)
4	Drum	Drum X1 Drum Fixing Plate X1	50K	AR202DM	Can be used for Zebra (AR-5015,AR5015N)

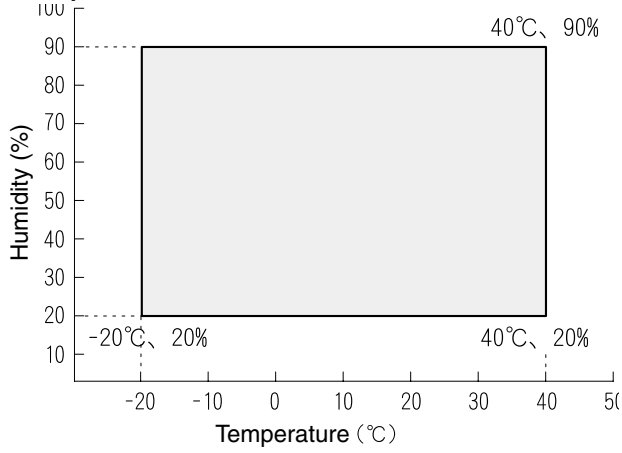
ARM205 SERIES (SEC/LAG)

No.	ITEM	CONTENT	LIFE	MODEL	REMARKS
1	Toner Cartridege (Black) with IC	TONER X10	16K X 10	AR-202MT	Life: 6% coverage, LT
2	Developer	Developer X10	50K X10	AR-202MD	Can be used for Panther Ref. (AR-207,AR-164)
3	Drum	Drum X1 Drum Fixing Plate X1	50K	AR202DR	Can be used for Panther Ref. (AR-207,AR-164)

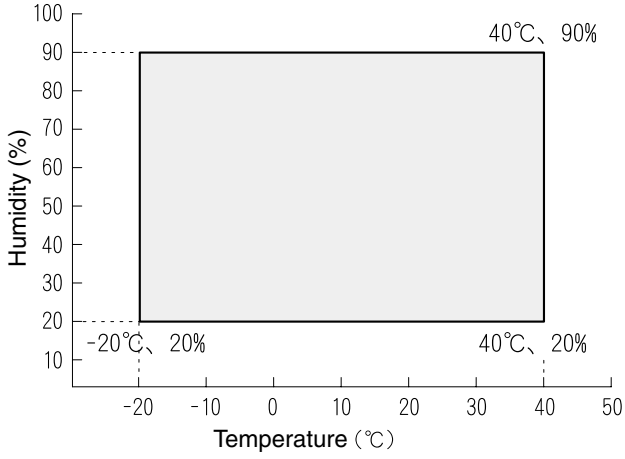
2. Environmental conditions

A. Transport conditions

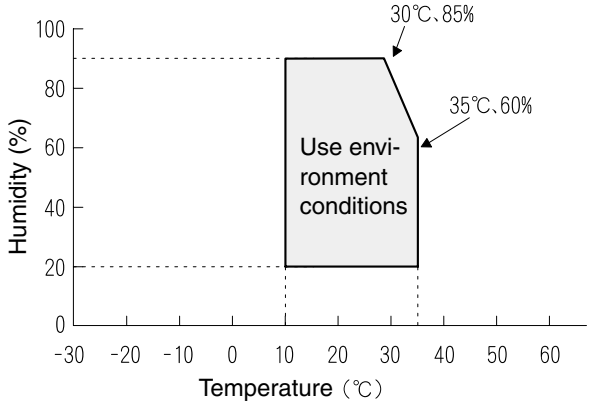
(1) Transport conditions



(2) Storage conditions



B. Use conditions



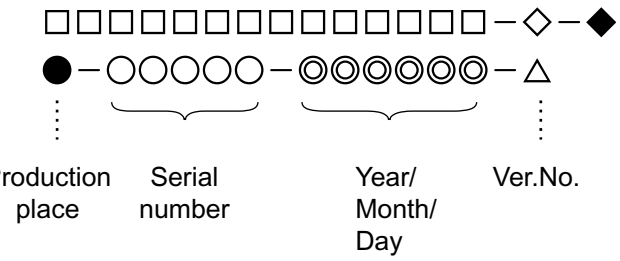
C. Life(packed conditions)

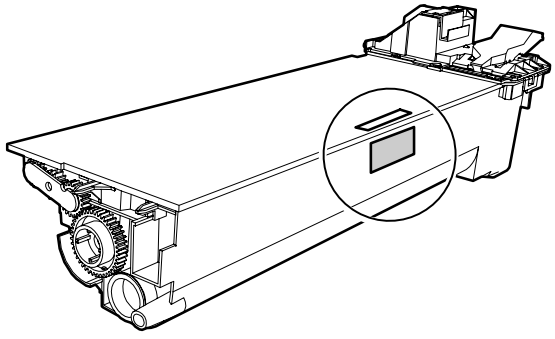
Photoconductor drum (36 months from the production month)
Developer, toner (24 months from the production month)

3. Production number identification

<Toner cartridge>

The label on the toner cartridge shows the date of production.



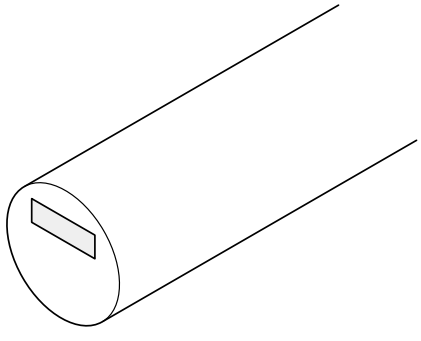


<Drum cartridge>

The lot number, printed on the front side flange, is composed of 6 digits, each digit showing the following content:

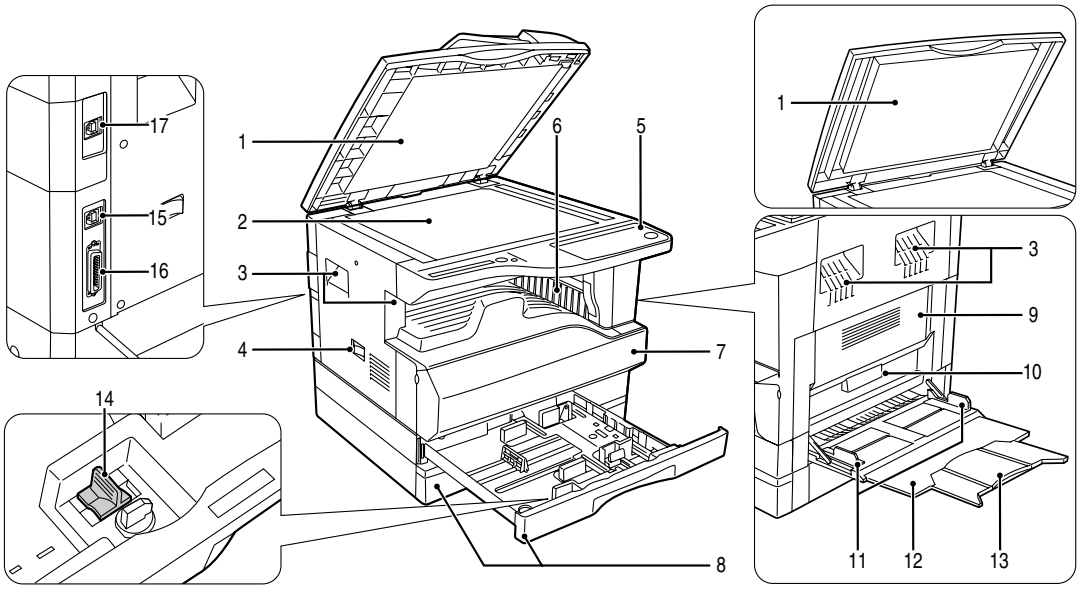
1	2	3	4	5	6

1	Alphabet
	Indicates the model conformity code. A for this model.
2	Number
	Indicates the end digit of the production year.
3	Number or X, Y, Z
	Indicates the month of packing.
	X stands for October, Y November, and Z December.
4/5	Number
	Indicates the day of the month of packing.
6	Alphabet
	Indicates the production factory. "A" for Nara Plant, “C“ for SOCC



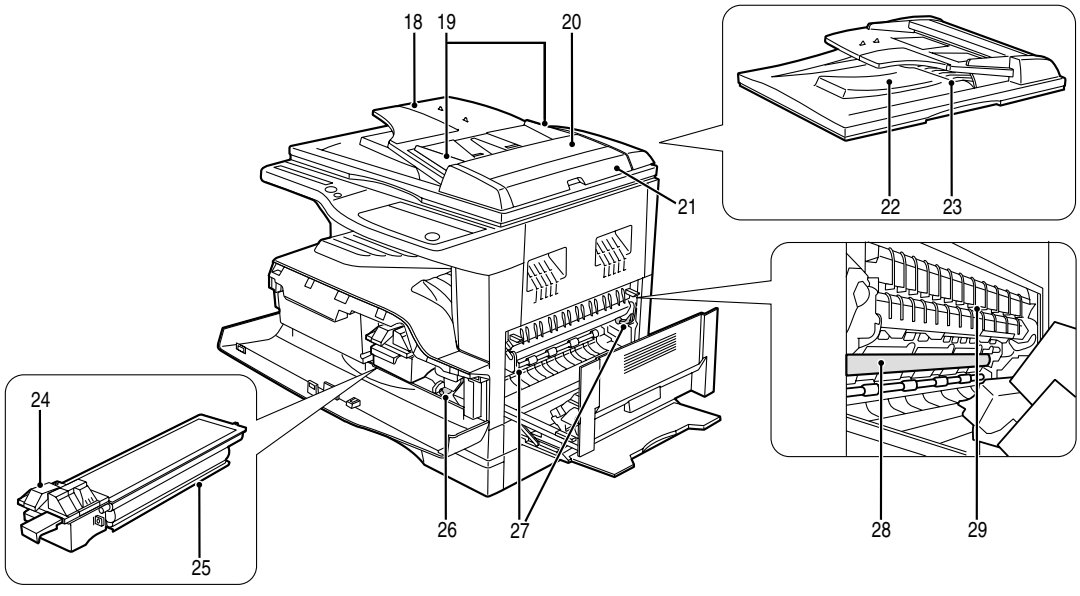
[4] EXTERNAL VIEWS AND INTERNAL STRUCTURES

1. Appearance



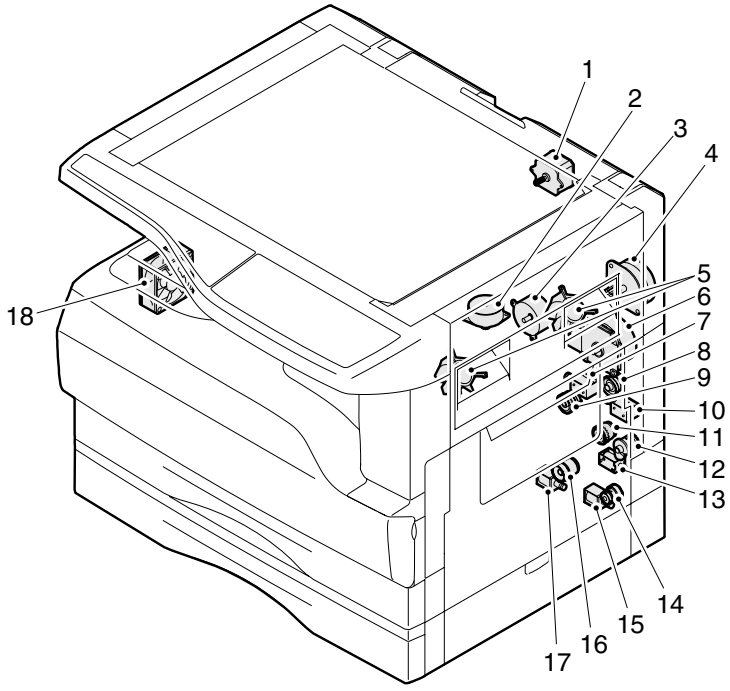
1	Document feeder cover (when the SPF/RSPF is installed) /document cover (when the document cover is installed)	2	Document glass	3	Handles
4	Power switch	5	Operation panel	6	Paper output tray
7	Front cover	8	Paper trays	9	Side cover
10	Side cover handle	11	Bypass tray guides	12	Bypass tray
13	Bypass tray extension	14	Charger cleaner	15	USB 1.1 port
16	Parallel port	17	USB 2.0 port (when the dual function board is installed)		

2. Internal



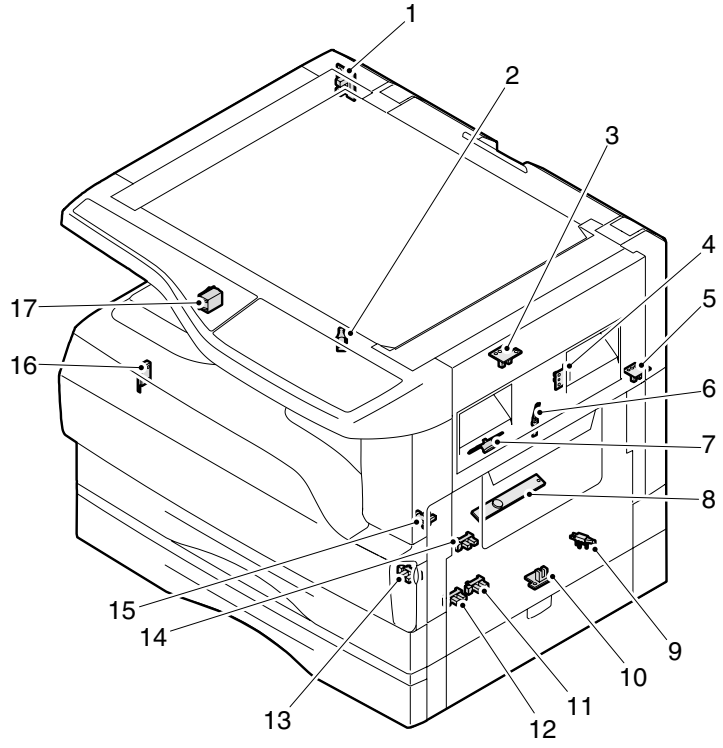
18	Document feeder tray (when the SPF/RSPF is installed)	19	Original guides (when the SPF/RSPF is installed)	20	Feeding roller cover (when the SPF/RSPF is installed)
21	Right side cover (when the SPF/RSPF is installed)	22	Exit area (when the SPF/RSPF is installed)	23	Reversing tray (when the RSPF is installed)
24	Toner cartridge lock release lever	25	Toner cartridge	26	Roller rotating knob
27	Fusing unit release levers	28	Photoconductive drum	29	Fusing unit paper guide

4. Motor, solenoid, clutch



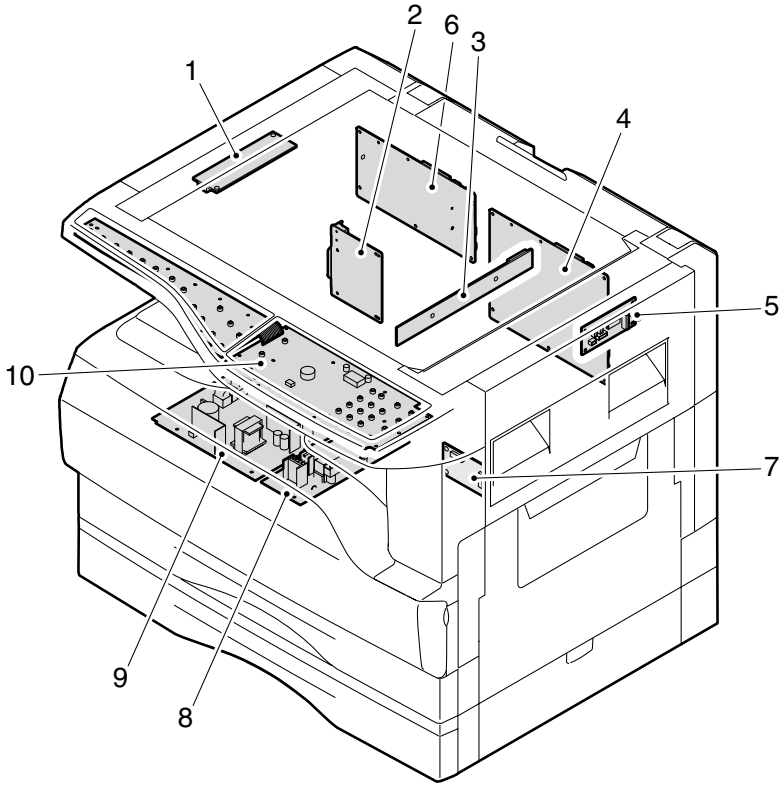
No.	Name	Code	Function operation
1	Mirror motor	MRM	Drives the optical mirror base (scanner unit).
2	Shifter motor	SHTM	Shifts the paper exit tray.
3	Toner motor	TM	Toner supply
4	Duplex motor	DPX	Switchback operation and paper exit motor in duplex.
5	Cooling fan motor	CFM	Cools the inside of the machine.
6	Main motor	MM	Drives the machine.
7	1st tray paper feed clutch	CPFC1	Drive the pick up roller
8	PS clutch	RRC	Drives the resist roller
9	Paper feed solenoid	CPSOL1	Solenoid for paper feed from cassette
10	Resist roller solenoid	RRS	Resist roller rotation control solenoid
11	Manual paper transport clutch	MPTC	Drives the manual paper transport roller.
12	Manual paper feed clutch	MPFC	Drives the manual paper feed roller.
13	Manual paper feed solenoid	MPFS	Manual paper feed solenoid
14	2nd tray transport clutch	CPFC2	Drives the 2nd tray transport roller.
15	2nd tray transport solenoid	FSOL1	2nd tray transport solenoid
16	2nd tray paper feed clutch	CPFC1	Drives the 2nd tray paper feed roller.
17	2nd tray paper feed solenoid	PSOL2	2nd tray transport solenoid
18	Exhaust fan motor	VFM	Cools the inside of the machine.

5. Sensor, switch



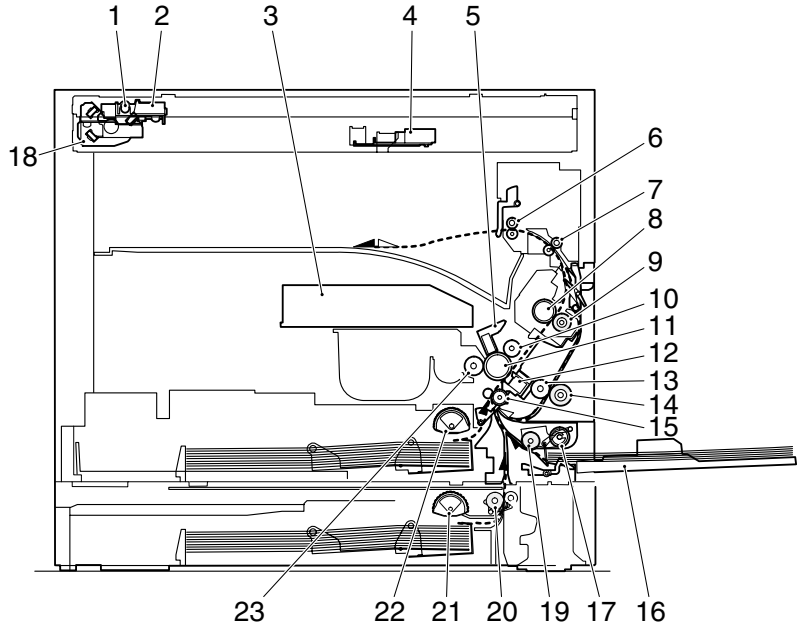
No.	Name	Code	Function operation
1	Mirror home position sensor	MHPS	Detects the mirror (scanner unit) home position.
2	Side door switch	DSWR	Side door open detection
3	Paper exit sensor (paper exit side)	POD1	Detects paper exit.
4	Shifter home position sensor	SFTHP	Shifter home position detection
5	Paper exit sensor (DUP side)	PDPX	Paper transport detection
6	Thermistor	RTH	Fusing section temperature detection
7	Thermostat		Fusing section abnormally high temperature detection
8	Toner density sensor	TCS	Toner quantity detection
9	2nd tray detection switch		2nd tray detection
10	Manual sensor	MPED	Manual transport detection
11	2nd tray door open/close sensor	DRS2	2nd tray door open/close detection
12	2nd tray door paper pass sensor	PPD2	2nd tray paper entry detection
13	2nd tray paper empty sensor	CSS2	2nd tray paper empty detection
14	Paper in sensor	PIN	Paper transport detection
15	Cassette empty		Tray paper entry detection
16	Front cover SW		Front cover open detection
17	Power switch	MAIN SW	Turns ON/OFF the main power source.

6. PWB unit



No.	Name	Function operation
1	Copy lamp Inverter PWB	Copy lamp control
2	I / F PWB	USB1.1, IEEE1284 I/F
3	CCD sensor PWB	Image scanning
4	Main control PWB	Main control PWB
5	Tray PWB	Shifter motor control
6	IMC2 PWB	Electronic sort, USB2.0 << Option:AR-EB7>>
7	2nd cassette PWB	2nd cassette control
8	High voltage PWB	High voltage control
9	Power PWB	AC power input/DC power control
10	Operation main PWB	Operation panel input/Display, operation panel section control

7. Cross sectional view



No.	Name	Function/Operation
1	Copy lamp	Image radiation lamp
2	Copy lamp unit	Operates in synchronization with No. 2/3 mirror unit to radiate documents sequentially.
3	LSU unit	Converts image signals into laser beams to write on the drum.
4	Lens unit	Reads images with the lens and the CCD.
5	MC holder unit	Supplies negative charges evenly on the drum.
6	Paper exit roller	Used to discharge paper.
7	Transport roller	Used to transport paper.
8	Upper heat roller	Fuses toner on paper (with the teflon roller).
9	Lower heat roller	Fuses toner on paper (with the silicon rubber roller).
10	Waste toner transport roller	Transports waste toner to the waste toner box.
11	Drum unit	Forms images.
12	Transfer charger unit	Transfer images (on the drum) onto paper.
13	DUP follower roller	
14	Duplex transport roller	Transports paper for duplex .
15	Resist roller	Takes synchronization between the paper lead edge and the image lead edge.
16	Manual paper feed tray	Manual paper feed tray
17	Manual paper pick up roller	Picks up paper in manual paper feed.
18	No. 2/3 mirror unit	Reflects the images from the copy lamp unit to the lens unit.
19	Manual transport roller	Transports paper from the manual paper feed port.
20	2nd tray paper transport roller	Transports paper from the 2nd tray.
21	2nd tray paper pick up roller (semi-circular roller)	Picks up paper from the 2nd tray.
22	1st tray paper feed roller (semi-circular roller)	Picks up paper from the 1st tray.
23	MG roller	Puts toner on the OPC drum.

[5]UNPACKING AND INSTALLATION

1.Installing conditions

A.Copier installation

Do not install your copier in areas that are:
•damp, humid, or very dusty
•exposed to direct sunlight
•poorly ventilated
•subject to extreme temperature or humidity changes, e.g., near an air conditioner or heater.
•Be sure to allow the required space around the machine for servicing and proper ventilation.

B.Power source

•Use an exclusive-use power outlet. If the power plug of this machine is inserted into a power outlet commonly used with other illumination units, flickers of the lamp may be result. Use a power outlet which is not used commonly with any illumination units.
•Avoid complex wiring.

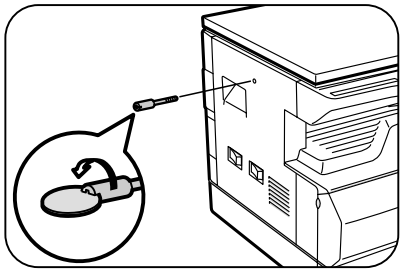
C.Grounding wire connection.

•To avoid danger, be sure to connect a grounding wire. If no grounding wire is connected and a leakage occurs, a fire or an electric shock may be result.

2.Removal of protective material and fixing screw

1) Remove all tapes and protective material.
•Remove all tapes, then open the document cover and remove the protective material of sheet shape

2) Remove the fixing screw.
•Use a coin to remove the fixing screw.
•The fixing screw is required when transporting the machine. Keep it in the tray. (Refer to the later description.)

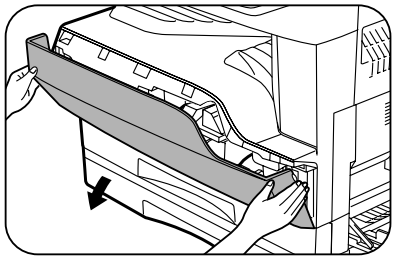


3.Installing procedure

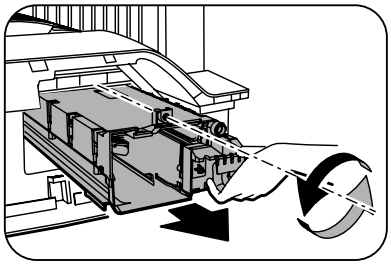
A.Developer cartridge installation

1) Open the manual tray, and open the side cover.

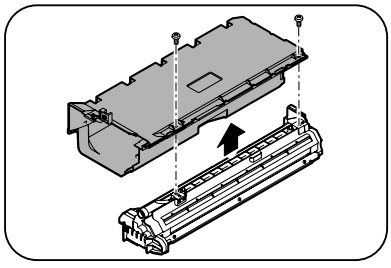
2) Open the front cover.
•Hold the both sides and pull down to open.



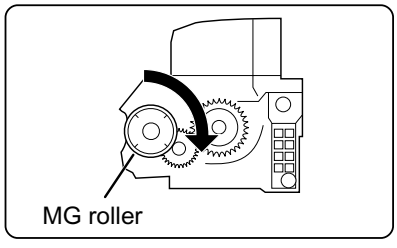
3) Loosen the screw and remove the developer cartridge.



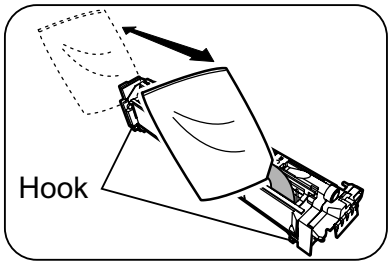
4) Remove the developer tank from the developer cartridge.



5) Supply developer into the developer tank while rotating the MG roller in the arrow direction.



* Shake the developer bag enough before opening it.



Note: Check that the DV seal is free from developing agent. If developing agent is attached to the DV seal, clean it carefully.
Check to insure that the hook is engaged in two positions.

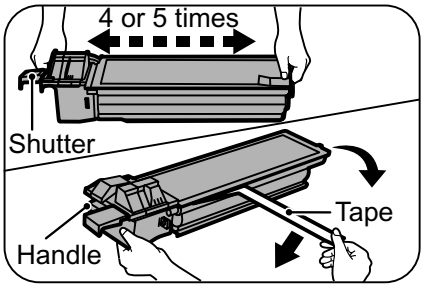
6) Attach the developer tank to the developer cartridge.
* After supplying developer into the developer cartridge, do not tilt or shake the developer cartridge.
7) Attach the developer cartridge to the copier, and fix it with the screw.

B.Toner cartridge installation

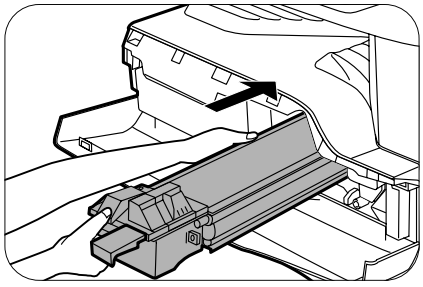
1) Shake the toner cartridge several times horizontally, and remove the tape.

* Do not hold the shutter lever when shaking.

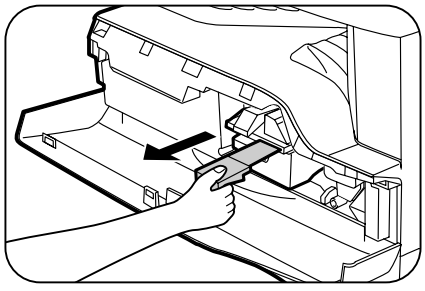
* After removing the tape, do not tilt or shake the toner cartridge.



2) Attach the toner cartridge to the copier.



3) Pull the shutter lever.

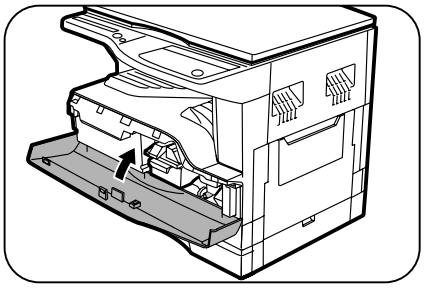


Close the front cover A, then close the side cover B.

•When closing the front cover, gently press the both sides.

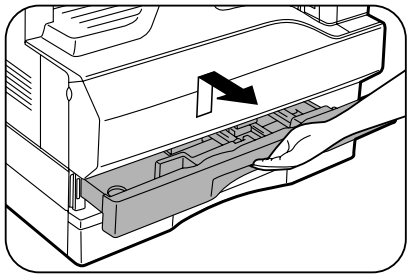
•When closing the side cover, hold the knob.

•When closing the covers, be sure to close the front cover first, then close the side cover. If closed in a wrong sequence, the covers may be broken.

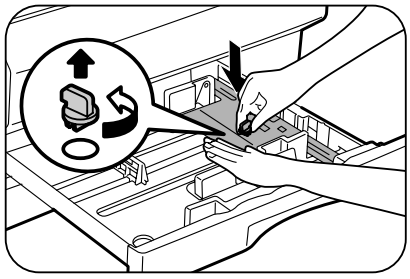


4.Removal and storage of fixing screw

1) Lift the knob and gently pull out the tray.



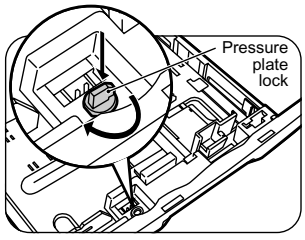
2) Hold the paper pressure plate and turn the fixing screw in the arrow direction.

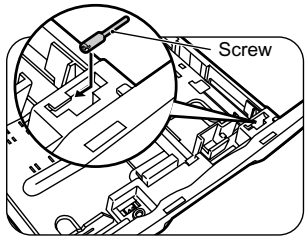


3) Store the fixing pin and the fixing screw in the tray.

•Store the fixing screw which was removed in the above procedure 2 and the fixing screw which was removed in procedure 2 of 2.

•Removal of protective material and fixing screw in the storage place in the tray.





5. Changing the copy paper size in the tray

Note

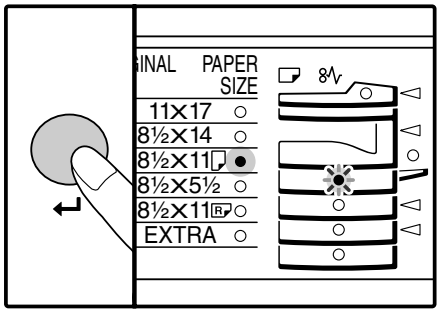
•The paper size setting cannot be changed when the machine has stopped temporarily due to running out of paper or a misfeed, or during interrupt copying.

•During printing (even in copy mode), the paper size setting cannot be changed.

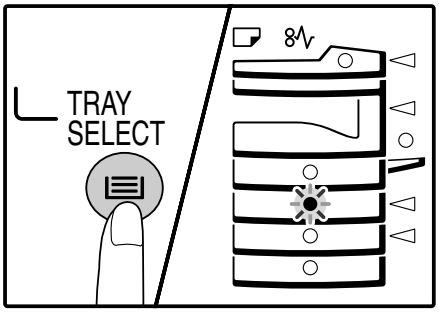
•5-1/2" x 8-1/2" size paper can only be selected in upper paper tray.

•Do not load paper that is a different size than the paper size setting. Copying will not be possible.

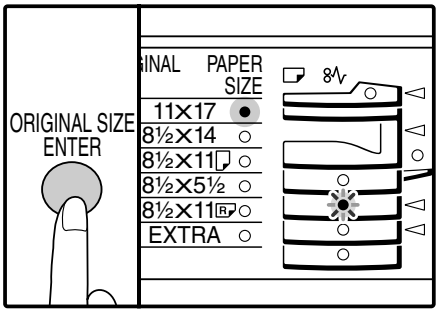
1) Hold down the [PAPER SIZE ENTER] key for more than 5 seconds to set the selected paper size.
   The currently selected paper feed location indicator will blink and the corresponding paper size (which is currently set) indicator will light steadily.
   All other indicators will go out.



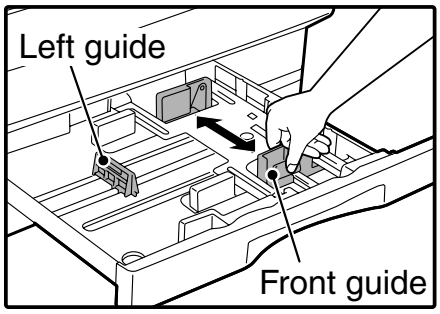
2) Use the [TRAY SELECT] key to select the paper tray for which you wish to change the paper size setting.
   Each time the [TRAY SELECT] key is pressed, a paper tray will be indicated with a blinking paper feed location indicator.



3) Use the [ORIGINAL SIZE ENTER] key to select the paper size.
   The indicator of the selected paper size lights up.



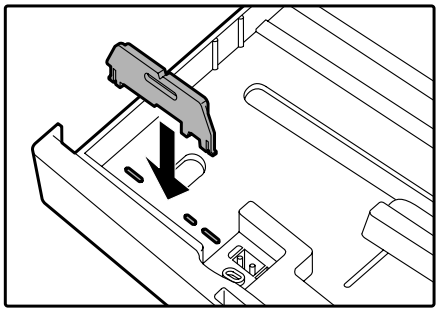
4) Squeeze the lock lever of the front guide and slide the front guide to match the width of the paper, and move the left guide to the appropriate slot as marked on the tray.



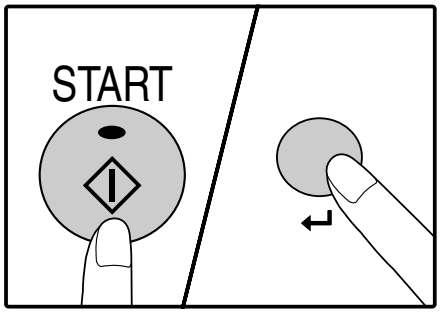
•The front guide is a slide-type guide. Grasp the locking knob on the guide and slide the guide to the indicator line of the paper to be loaded.

•The left guide is an insert-type guide. Remove it and then insert it at the indicator line of the paper to be loaded.

•When using 11" x 17" sized paper store the left guide in the slot at the left front of the paper tray.



6) Press the [START] key and then the [PAPER SIZE ENTER] key.
   To change the paper size setting of another tray, repeat steps 2 to 3 after pressing the [START] key.



Note

Affix the paper size label for the paper size selected in step 3 to the label position on the right end of the tray.

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !

Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish) VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION

Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung

Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

CAUTION FOR BATTERY DISPOSAL

(For USA,CANADA)

Contains lithium-ion battery. Must be disposed of properly.
Remove the battery from the product and contact
federal or state environmental
agencies for information on recycling and disposal options.

SHARP

COPYRIGHT © 2003 BY SHARP CORPORATION
All rights reserved.
Printed in Japan.
No part of this publication may be reproduced,
stored in a retrieval system, or transmitted,
in any form or by any means,
electronic, mechanical, photocopying, recording, or otherwise,
without prior written permission of the publisher.

Trademark acknowledgments
Windows and Windows NT are trademarks of Microsoft Corporation in the U.S.A. and other countries.
IBM and PC/AT are trademarks of International Business Machines Corporation.
PCL is a trademark of Hewlett-Packard Company.
Pentium is a registered trademark of Intel Corporation.
All other trademarks and copyrights are the property of their respective owners.

SHARP CORPORATION
Digital Document System Group
Products Quality Assurance Department
Yamatokoriyama, Nara 639-1186, Japan
2003 June Printed in Japan (N)